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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,174	09/17/2003	Edwin D. Parsons	P50-0114	8558

7590

03/28/2005

Alan A. Csontos
Michelin North America, Inc.
P.O. Box 2026
Greenville, SC 29602

EXAMINER

SINGH, ARTI R

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 03/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/667,174

Applicant(s)

PARSONS, EDWIN D.

Examiner

Ms. Arti Singh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 September 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification (PCT/US02/38411 & 18411) but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Claim Objections

2. Claim 6 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. It appears that the claim is a duplicate of Claim 5.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-7, 9-16 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,736,472 issued to Mahn, Jr. et al. further in view of USPN 5,573,610 issued to Koch et al.

5. USPN 5,736,472 issued to Mahn, Jr. et al. discloses SBR and natural rubber articles which can be marked with indicia are formed by curing the SBR or natural rubber under heat

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and pressure in contact with a fabric material. The curing conditions force the fabric into the cured rubber article. The fabric can then be marked with a heat-activated, indicia-bearing transfer. This provides for unique decoration of articles such as mud flaps and the like, and also permits providing identification for other rubber articles such as tires and the like (abstract). According to the present invention, an outer surface of the natural rubber or SBR product is at least partially covered with a fabric material prior to cure. The product is then cured under pressure with this fabric material in place, forcing the material into the surface of the rubber article. The cure of the rubber physically bonds the fabric to the product, leaving the surface of the fabric exposed. This exposed surface can then be marked with indicia using various thermoplastic products and permitting the rubber article to be easily and uniquely marked without incurring significant expense. At the same time, the indicia is strongly adhered to the product and can withstand high and low temperatures as well as abrasive forces. Further, the cloth layer can be laminated to a thermoplastic layer such as a thermoplastic elastomer. The cloth is bonded to the rubber product during cure with the thermoplastic separated from the rubber by the cloth layer. The cloth will keep the thermoplastic from flowing during cure. The thermoplastic, in turn, can provide a colored surface and can provide a surface to which latex and other materials will adhere (column 1, line 55 to column 2, line 9). The cloth layer can be a woven or nonwoven fabric, preferably formed from a tight weave, and able to withstand curing temperatures and pressure. Typically, these rubbers are cured at about 260-350 degrees F (preferably 310 degrees F) at 70 to 800 psi or greater. One preferred material is a polyester broadcloth fabric which has a smooth woven surface on one side and a brushed surface on the other side. The brushed surface is designed to provide a fibrous side which can extend into the rubber 14. The weight of the fabric can be varied, depending upon the application. One suitable material has 85

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ends, 62 picks and a weight of 8.80 oz per square yard. Various fabrics include adhesion promoters which can be beneficial. A suitable material can be purchased from Milliken. Another material suitable for use in the present invention is a punched polyethylene fibrous web having a fabric weight of 12.5 oz per square yard. Cotton can also be used, as well as polyethylene, polypropylene, polyester, polyamides and blends. Again, the particular material employed can depend on aesthetics as well as cost. Even a relatively inexpensive cotton terry cloth or burlap can be used for practicing the present invention. Various weaves can be employed such as twill, satin, osnaberg and, of course, broadcloth. A tight weave is preferred. But if curing pressures are lowered, a looser weave can be employed. Preferably, the cloth will be the same color as the rubber. This allows the cloth to blend in with the rubber. As will be described hereinafter, the indicia can be a wide variety of indicia. Indicia 13, as shown in FIG. 3 includes an upper pigmented layer 23 and a lower adhesive layer 22 adhered to cloth surface 15. Basically, any adhesive indicia is suitable for use in the present invention so long as the adhesive is compatible with the fabric layer 15. Due to the variety of different fabric layers that can be employed, practically any thermoplastic heat activated transfer can be used for the present invention. Preferably, a heat activated indicia bearing transfer is employed. These employ a heat activated adhesive--either a thermoplastic adhesive or a heat activated thermoset adhesive. In particular, heat activated transfers which have a polyurethane adhesive lower layer are suitable for use in the present invention. Other suitable lower layers would include polyvinyl chloride adhesive, thermoplastic polyolefin, thermoplastic polyesters, as well as polyamides, EVA, and nitrile/PVC gum (which is a thermoplastic elastomer). Although less preferred, other types of adhesives such as moisture cure and air curing thermoset adhesives can be employed, as well as pressure sensitive adhesives. Likewise, the upper indicia bearing layer can be a variety of

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different generally pigmented or contrasting layers. For example, thermoplastic elastomers, pigmented polyurethane, pigmented polyethylene, pigmented polyesters, as well as any pigmented film. For mud flaps, the pigmented layer is exposed to sun, weather, and the elements. Therefore, it needs to hold up. A preferred material is a thermoplastic elastomer formed from nitrile rubber and PVC. The rubber article 14 with the embedded fabric layer 15 is formed, as shown in FIG. 2, using a compressive heat cure. The uncured SBR or natural rubber blended with a curing package is placed into a cavity 16 of a mold 17 leaving an exposed surface 18. The fabric material 15 is placed on top of this exposed surface 18 and a compressive surface 19 of mold 17 is forced down upon the cloth fabric 15, as indicated by arrow 20. Heat and pressure are applied effective to cure the SBR rubber or natural rubber. As previously indicated, the cure pressures run from 70 to 800 psi and temperatures of 260 degrees to 350 degrees F. Once cured, the formed article 21 is removed from the mold and trimmed and subsequently can be marked with the previously-described indicia transfer 13. If transfer 13 is a heat activated transfer, this is bonded to article 21 by simply placing the heat activated transfer 13 with its thermoplastic or thermoactive adhesive side 22 against the cloth substrate 15, applying heat and pressure causing the adhesive layer 22 to melt and bond indicia layer 23 to layer 15 to in turn form the articles shown in FIG. 3.

The only teaching not found here is that the label itself is RFID.

Koch et al. teach using an RFID in tires both in and on the adhesive layers. A person having ordinary skill in the art at the time the invention was made would have found it obvious to have employed and RFID in a tire, such as that taught by Koch et al. one would have been motivated to do so in order to monitor the tires which use self powered, programmable electronic devices (column 1, lines 10-20).

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6. Claims 8 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,736,472 issued to Mahn, Jr. et al. in view of USPN 5,573,610 issued to Koch et al. further in view of USPN 6,630,531 issued to Khandpur et al.

as set forth above it can be seen that all the limitations have been met except for the limitations of using a foam as a base layer. Khandpur et al. discloses multiple and interchangeable uses of foams, films and fabrics which are all adjacent to an adhesive layer (column 9, line 63 to column 10, line 10). There a person having ordinary skill in the art at the time the invention was made would have found it obvious to have employed a foam as the base layer instead of a fabric, motivated by the reasoned expectation of providing a composite that is lighter in weight and is easily recyclable as both the layers could chemically be the same.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ms. Arti Singh whose telephone number is 571-272-1483. The examiner can normally be reached on M-F 9-7pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ms. Arti Singh

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Primary Examiner
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